Computer Vision Engineer, DJI RoboMaster Competition Sept 2020 - June 2024

C++/OpenCV/Linux/Git/Detection&Tracking/SLAM

Coordinated resources to promote R&D progress, winning the 3rdin RoboMaster 2023 University League

Developed a real-time auto-aim system for mobile robots on NVIDIA NX in C++/Linux environment  Processed video inputs from Hikvision industrial cameras with OpenCV to support object detection

Implemented a trajectory prediction algorithm using least squares method, improving efficiency by 50%

Co-designed an user interface for robot manipulation, outperforming 80% teams in the match

Product Manager Intern, Momenta Feb 2024 - June 2024

Product management of autopilot software for GM Cadillac in challenging underground parking scenarios Composed product requirement documents by leveraging data from 5 drivers with 20+ years’ driving experience

Wrote a Python class library to extract and format extensive Microsoft Word test reports using PyDocx

Pioneered a data processing tool for automatic report generation, improving efficiency in issue analysis by 87.5%

Boosted performance by 3% in simulation, road, and bench tests within 4 months since the first version released

Research Assistant, Visual Explainer For Deep Learning Decisions Sept 2023 - May 2024

Developed a web application for explaining DNN image classification decisions

Utilized semantic segmentation followed by superpixel segmentation to extract two-level image features

Trained an AutoEncoder using PyTorch to construct an image tree with outputs of DNN feature extractor

Clustered two-level image features respectively to identify human cognition-aligned concept for explanation

Showcased the explanation result through heatmaps by developing a Vue+Django+MySQL

Research Assistant, Mining Property Relations of NASICON Solid Electrolyte Sept 2021 - May 2023

Developed a web application for investigating relations between material properties

Formalized a data pipeline for NASICON-related texts, integrating pre-processing, BERT-based NLP models for Named Entity Recognition (NER) and Relational Extraction (RE), and visualization

Pre-processed 7,000+ high-quality NASICON literature sentences to enhance NER and RE model performance

Visualized entity-relation triples using Neo4j knowledge graph and Py2neo for user-friendly interaction

Implemented the processing pipeline utilizing Vue+SpringBoot+MySQL/Neo4j

Head Referee Intern, DJI Jan 2024 - April 2024

Lead Robot Inspector Intern, FIRST Nov 2023 - Jan 2024

Robot Inspector Intern, FIRST Jan 2021 - Mar 2021

Team Leader, FIRST Tech Challenge 16107 Facing The Giants Sept 2017 - Jan 2020

Vuforia/TensorFlow/Object Detection/Color Sensor/Leadership/Community Outreach

Developed control system using motor encoders(used to synchronize motors), IMU(gyroscope track the heading to drive straight lines), and color sensors(detect distance).

Developed detection system using webcam and integrated Vuforia and TensorFlow SDK

Achieved twice admissions into FIRST World Championships (top 2.1 % out of 7500 teams), 1 Inspire Award(top 1 out of 35 teams), and 3 Connect Awards(top 8% out of 60 teams)

Promoted team culture, STEM, and engineer spirit in regional TV shows

This is the interview description:

Thanks for scheduling an interview for the Perception Software Engineer position at Cepton, Inc. You will be meeting James Lin. The interview is scheduled for 10:00am on Wednesday 9 October 2024 (Pacific Daylight Time). It should last 30 minutes. In this informal chat with our HR department, we will outline the role in a bit more detail and talk with you about your background and expectations.

About the job

<https://www.linkedin.com/jobs/collections/recommended/?currentJobId=4032971234>